	Code 600 Corporate and Corporate Plus Workstation	
Description	Single user system, administrative, financial and some manager's systems. User's job requires NASA interoperability software and access to NASA administrative applications. Machines are likely to be Windows or MacOS X based. Some of these systems can be used remotely. Corporate Plus workstations may have file server dependencies or specialized software.	
	Classification	**Details and Specifications**
Hardware	Common	PC or Mac; light weight is important; early technology infusion is often needed.
Operating System	Common	
Software	Common	
Support Level	Common	
Return to Service (RTS) Levels	Common, Enhanced, Critical	Depending on job responsibilities.
Security	Low	
Network Accessed Resources	Common	Network Printers, Email, Servers, possibly shared data files for resource analysts
Funding Profile	Variable	Operating Account, some R&D, none, CM&O
System Ownership	NASA, GFE, Contractor-owned, ODIN, Other	

	Code 600 Standalone Science + Engineering Workstation	
Description	The user typically requires access to and development of, specialized programs tailored to specific science requirements. The user does: science analysis and modeling on multiple datasets; development of science algorithms, models, and data management tools. Large local (and shared) disks and high network throughput may be required to support the work performed. Some of these systems can be used remotely. Systems can be involved in high volume data transfers. Systems require a common authorization and authentication required to share networked filesystems and resources. The user typically requires access to (and development of) specialized programs tailored to specific science requirements. Specialized software and data and information management services may be available from networked resources. Systems sometimes have inter-dependencies.	
	Classification	**Details and Specifications**
Hardware	Common or Common with Unique Add-in	Enhancements might include large disk volumes, large monitors, dual monitors, extra memory requiring new motherboard, quad processor, special peripherals, and accelerated high resolution graphics card early technology infusion is often needed. Laptops are included in this category, with special requirements such as needing extra light weight, connecting to the Internet from a variety of locations including international travel and meetings, support field work and so occasionally require user self support.
Operating System	Common with User System Access Required, Often running multiple OS eg Windows and UNIX with User System Access Required	User-level elevated privileges often required

	Code 600 Standalone Science + Engineering Workstation(continued)	
Software	Discipline-Specific	COTS and Custom Science tools. User-unique analysis tools. Some tools conform to industrial standards for specialized system. Also may include open source software, compilers and data analysis software. Examples are GNU Fortran, C, C++ compilers, Scilab (a Matlab clone), Open Office, and some graphics programs.
Support Level	Specialize System Administrator Support	Local sysadmin support for discipline-specific applications, configurations, access to shared data, etc
Return to Service (RTS) Levels	Enhanced, Critical	
Security	Low	
Network Accessed Resources	Uncommon	Shared science files, shared applications, Network printers, file servers, application servers, web servers
Funding Profile	Variable	R&D, None, CM&O
System Ownership	NASA, GFE, Contractor-owned, ODIN, Other	

	Code 600 Clustered Science + Engineering Workstation	
Description	Systems can function as a multiuser system with a common authorization and authentication required to share networked filesystems and resources. The user typically requires access to specialized programs tailored to specific science requirements. The machines are generally clustered. Specialized software maybe available from centralized networked file systems. Some machines in this category are used for OS development work, to develop new methods of utilizing IT or to perform system administration functions for other systems in the IT environment. Systems may have interdependencies or client/server dependencies for various resources including authentication, file systems, home directories. Systems can be involved in high volume data transfers.Systems have inter-dependencies. Systems may also have security related inter-dependencies such as system level firewall configurations, ssh keys, and active intrusion detection software that are designed to enhance the security of all trusted systems through the principle of least privilege.	
	Classification	**Details and Specifications**
Hardware	Common or Common with Unique Add-in	Enhancements might include large disk volumes, large monitors, dual monitors, extra memory requiring new motherboard, quad processor, special peripherals; light weight is important; early technology infusion is often needed.
Operating System	Common with User System Access Required or Common w/ Unique Config	User-level elevated privileges often required

	Code 600 Clustered Science + Engineering Workstation (continued)	
Software	Discipline-Specific, Unique	COTS and Custom Science tools, user-unique analysis tools, self generated tools (e.g. very large chemical models), highly customized network communications, models . Also may include open source software, compilers and data analysis software. Examples are GNU Fortran, C, C++ compilers, Scilab (a Matlab clone), Open Office, and some graphics programs.
Support Level	Specialized System Administrator Support	Local sysadmin support for OS, discipline specific design, discipline-specific applications, configurations, access to shared data, dependencies on servers, etc.
Return to Service (RTS) Levels	Enhanced, Critical	
Security	Low	
Network Accessed Resources	Uncommon, or Case-by-case	Shared authentication, dependencies on servers, shared science files, shared applications, Network printers, file servers, application servers, web servers
Funding Profile	Variable	R&D, None, CM&O
System Ownership	NASA, GFE, Contractor-owned, Other Gov't Agencies and Universities	

	Code 600 Beowulf Clustered Workstation	
Description	The systems maybe deployed as a supercomputer doing parallel processing or they may be doing individual computing. Use high speed network interconnects. Some machines in this category are used to develop new methods of utilizing IT or to perform system administration functions for other systems in the IT environment. Systems have client/server dependencies. Systems can be involved in high volume data transfers. These systems are not desktops.	
	Classification	**Details and Specifications**
Hardware	State-of-the-art Hardware	Beowulf clusters. Can also make cluster out of old CPUs. High speed network interconnects among cluster nodes.
Operating System	Common with Unique Configuration	Special shared resource configurations: NIS, NFS, LDAP, inter-task communications, shared disk and memory, …
Software	Discipline-Specific and Unique	Specialized tools (e.g. schedulers, performance monitors) for Beowulf clusters. COTS and Custom Science tools, user-unique analysis tools, self generated tools. Also may include open source software, compilers and data analysis software. Examples are GNU Fortran, C, C++ compilers, Scilab (a Matlab clone), Open Office, and some graphics programs.
Support Level	Specialized System Administrator Support	Located in computer rooms with special cooling and power. Local sysadmin support with expertise in Beowulf clusters, discipline-specific applications, configurations, access to shared data, etc.
Return to Service (RTS) Levels	Critical	

	Code 600 Beowulf Clustered Workstation (continued)	
Security	Low	
Network Accessed Resources	Unique	High-speed node interconnect network, shared science files, shared applications, Network printers, file servers, application servers, web servers
Funding Profile	Variable	R&D, None, CM&O
System Ownership	NASA	

	Code 600 Lab and Field support S&E Workstation	
Description	Systems are involved in data acquisition and processing and/or process control. Machines in this category are directly involved with supporting instrument development for science R&D, as well as flight hardware which can be in either a development cycle or production cycle. This category also includes machines which are located in remote field locations for purposes of processing data from flights or for other aspects of mission operations. This category covers mission operation centers in pre and post launch scenarios.	
	Classification	**Details and Specifications**
Hardware	Common with Unique Add-in	Interface to instruments, simulators, etc.; light weight is important; early technology infusion is often needed.
Operating System	Any category OS: Unique, Common, etc.	Special drivers required. Legacy OS for "frozen" systems.
Software	Unique, Discipline-Unique	Special drivers required, real-time embedded applications. Often use same software as standalone S&E workstation
Support Level	Specialized System Administrator Support	Local sysadmin support for discipline-specific applications, configurations, access to shared data, etc. Project support staff are often the sysadmins. Systems travel to the field. User self-support while in the field.
Return to Service (RTS) Levels	Low to Critical	Full spectrum of RTS levels, depending on application
Security	Low	
Network Accessed Resources	Unique	May use standard building network, or local networks for projects
Funding Profile	Variable	R&D, none, CM&O
System Ownership	NASA, or outside institutions	Typically NASA-owned, but may be owned by other agency or institution

	Code 600 Legacy Systems	
Description	Old unsupported hardware and/or software.	
	Classification	**Details and Specifications**
Hardware	Common	Old hardware
Operating System	Unique	Legacy OS
Software	Unique	Legacy Software
Support Level	Specialized System Administrator Support	Usually supporting a mission or in MO&DA phase with little or no dollars.
Return to Service (RTS) Levels	Critical	
Security	Low	
Network Accessed Resources	Unique	Local networks for projects
Funding Profile	Variable	Usually operating on $0
System Ownership	NASA, GFE, Contractor-owned, Other	Typically NASA-owned, but may be owned by other agency or institution

	Code 600 Servers	
Description	A machine that can provide one or more of the following: authentication, licenses, files, applications, database, web and compute resources.	
	Classification	**Details and Specifications**
Hardware	Common or Common with Unique Add-in	Enhancements might include large disk volumes, large monitors, dual monitors, extra memory requiring new motherboard, quad processor, special peripherals
Operating System	Common or Common with Unique Add-in	Special shared resource configurations: NIS, NFS, LDAP, … Clients are dependent on servers for resources.
Software	Discipline-Specific	COTS and Custom Science tools, user-unique analysis tools, self generated tools. Also may include open source software, compilers and data analysis software. Examples are GNU Fortran, C, C++ compilers, Scilab (a Matlab clone), Open Office, and some graphics programs.
Support Level	Specialized System Administrator Support	Local sysadmin support for discipline-specific applications, configurations, access to shared data, dependencies on servers, etc.
Return to Service (RTS) Levels	Enhanced, Critical	
Security	Low	
Network Accessed Resources	Uncommon	Shared authentication, servers impact clients shared science files, shared applications, Network printers, file servers, application servers, web servers
Funding Profile	Variable	R&D, None, CM&O
System Ownership	NASA, GFE, Contractor-owned, Other	

	Code 600 Mission Science Operations	
Description	2 types of machines -Servers used in data ingest, data archival, data serving, and data production, and workstations used for data analysis and production monitoring. Workstation user typically requires access to specialized programs tailored to specific science requirements and may require critical system administration support well beyond 9x5. The user may do science analysis on multiple datasets. Large local disks maybe required to support the work performed. Most of these systems can be used remotely. Systems can be involved in high volume data transfers. Servers may be single purpose devices dedicated to serving data, or provide disk space, memory and cpu for computation that can't be handled by a workstation. The machines which upload instrument plans directly to the flight operations team machine are under configuration control. Those workstations interact with mission ops to upload instrument commands as well as receive telemetry, housekeeping, etc. Other machines in the area talk to the configuration controlled machines. The other machines are not under configuration control, but many of them are legacy machines with no funds to upgrade or make changes. It is important that a mission manager have control of the architecture of mission hardware and its evolution over time, in order best to balance mission requirements, scientific return, and value to the taxpayer.	
	Classification	**Details and Specifications**
Hardware	Common with Unique Add-in, Unique	PC, Macintosh, Sun, Dec Alpha, IBM, Dual Monitor Systems, Large monitors, external firewire drives, large special purpose fileservers / RAID, switching equipment. The machines which upload instrument plans directly to the flight operations team machine are under configuration control. Those workstations interact with mission ops to upload instrument commands as well as receive telemetry, housekeeping, etc. Other machines in the area talk to the configuration controlled machines. The other machines are not under configuration control, but many of them are legacy machines with no funds to upgrade or make changes.

	Code 600 Mission Science Operations (continued)	
Operating System	Common, Common with User System Access Required, Uncommon, Unique	Windows, OSX, OSX Server, Tru64, Solaris, AIX, Irix, Linux, Vax VMS, Open VMS, Custom OS on dedicated NAS fileservers. Legacy operating systems sometimes necessary for compatibility with flight h/w interfaces. Legacy OS sometimes needed to support unsupported compilers used in flight software generation
Software	Common, Common with User System Access Required, Uncommon, Unique	COTS and Custom Science tools, user-unique analysis tools, Legacy Software, Office, PKI, MySQL, Oracle, IDL, Environmental monitoring. Specialized drivers for unique h/w interfaces.
Support Level	Specialized System Administrator Support	Local sysadmin support for discipline-specific applications, configurations, access to shared data, etc.
Return to Service (RTS) Levels	Common, Enhanced, Critical	
Security	Low or Moderate	
Network Accessed Resources	Unique	Shared science files, Network printers, NFS file servers, web servers, mail servers, ftp servers, time server. Frequently run on enhanced security networks, private and IONET. Interfaces with flight operation machines for uploading and monitoring of science flight instrument control commands
Funding Profile	Variable	R&D
System Ownership	NASA GFE, ESA, and Contractor	